IMMUNOLOGY

CONTENTS

Vol 113, No. 1, September 2004

Review articles

1 *Christopher D. Gregory & Andrew Devitt:* The macrophage and the apoptotic cell: an innate immune interaction viewed simplistically?

15 *Angela L. Man, Maria Elena Prieto-Garcia & Claudio Nicoletti:* Improving M cell mediated transport across mucosal barriers: do certain bacteria hold the keys?

Comment

23 *Aymen Al-Shamkhani:* CD137: costimulator turns suppressor?

Original articles

26 *P. Han, T. Mcdonald & G. Hodge:* Potential immaturity of the T-cell and antigen-presenting cell interaction in cord blood with particular emphasis on the CD40-CD40 ligand costimulatory pathway

35 *Yoshiko Habu, Takefumi Uchida, Takuo Inui, Hiroyuki Nakashima, Masashi Fukasawa & Shuhji Seki:* Enhancement of the synthetic ligand-mediated function of liver $NK1.1Ag^+$ T cells in mice by interleukin-12 pretreatment

44 *Xingya Li, Yafei Wang, David Urso, James O'Rourke & Robert E. Cone:* Thymocytes induced by antigen injection into the anterior chamber activate splenic $CD8^+$ suppressor cells and enhance the antigen-induced production of immunoglobulin G1 antibodies

57 *Tai-Long Pan, Pei-Wen Wang, Chao-Chen Huang, Shigeru Goto & Chao-Long Chen:* Expression, by functional proteomics, of spontaneous tolerance in rat orthotopic liver transplantation

65 *Ian Todd, Paul M. Radford, Kelly-Ann Draper-Morgan, Richard McIntosh, Susan Bainbridge, Peter Dickinson, Lama Jamhawi, Marios Sansaridis, Mary L. Huggins, Patrick J. Tighe & Richard J. Powell:* Mutant forms of tumour necrosis factor receptor I that occur in TNF receptor-associated periodic syndrome retain signalling functions but show abnormal behaviour

80 *Marten Trendelenburg, Anthony P. Manderson, Liliane Fossati-Jimack, Mark J. Walport & Marina Botto:* Monocytosis and accelerated activation of lymphocytes in C1q-deficient autoimmune-prone mice

89 *Juergen L. Foell, Belkis I. Diez-Mendiondo, Oliver H. Diez, Ursula Holzer, Peter Ruck, Abhijit S. Bapat, Michael K. Hoffmann, Robert S. Mittler & Guenther E. Dannecker:* Engagement of the CD137 (4-1BB) costimulatory molecule inhibits and reverses the autoimmune process in collagen-induced arthritis and establishes lasting disease resistance

99 *Elayne Pereira, Márcia Cristina Tamia-Ferreira, Renato Sousa Cardoso, Stephano Spanó Mello, Elza Tiemi Sakamoto-Hojo, Geraldo A. S. Passos & Eduardo Antonio Donadi:* Immunosuppressive therapy modulates T lymphocyte gene expression in patients with systemic lupus erythematosus

106 *Chae-Seo Rhee, Lev Libet, Dugald Chisholm, Kenji Takabayashi, Stephen Baird, Timothy D. Bigby, Chul Hee Lee, Anthony A. Horner & Eyal Raz:* Allergen-independent immunostimulatory sequence oligodeoxynucleotide therapy attenuates experimental allergic rhinitis

114 *Shawn Babiuk, Neeloffer Mookherjee, Reno Pontarollo, Phillip Griebel, Sylvia Van Drunen Littel-Van Den Hurk, Rolf Hecker & Lorne Babiuk:* $TLR9^{-/-}$ and $TLR9^{+/+}$ mice display similar immune responses to a DNA vaccine

121 *Takashi Shimizu, Yutaka Kida & Koichi Kuwano:* Lipid-associated membrane proteins of *Mycoplasma fermentans* and *M. penetrans* activate human immunodeficiency virus long-terminal repeats through Toll-like receptors

130 *V. L. D. Bonato, E. D. C. Gonçalves, E. G. Soares, R. R. Santos Júnior, A. Sartori, A. A. M. Coelho-Castelo & C. L. Silva:* Immune regulatory effect of pHSP65 DNA therapy in pulmonary tuberculosis: activation of $CD8^+$ cells, interferon-γ recovery and reduction of lung injury

139 *Christina L. Swaggerty, Michael H. Kogut, Pamela J. Ferro, Lisa Rothwell, Igal Y. Pevzner & Pete Kaiser:* Differential cytokine mRNA expression in heterophils isolated from *Salmonella*-resistant and -susceptible chickens

149 Future meetings

151 Forthcoming papers

Vol 113, No. 2, October 2004

Review articles

153 *Eva M. Pålsson-McDermott & Luke A. J. O'Neill:* Signal transduction by the lipopolysaccharide receptor, Toll-like receptor-4

163 *Dominic F. Kelly, E. Richard Moxon & Andrew J. Pollard: Haemophilus influenzae* type b conjugate vaccines

Comment

175 *Jenny M. Woof & Michael A. Kerr:* IgA function – variations on a theme

Original articles

178 *Kenneth A. Rogers, Franco Scinicariello & Roberta Attanasio:* Identification and characterization of macaque CD89 (immunoglobulin A Fc receptor)

187 *Adam F. Cunningham, Karine Serre, Elodie Mohr, Mahmood Khan & Kai-Michael Toellner:* Loss of CD154 impairs the Th2 extrafollicular plasma cell response but not early T cell proliferation and interleukin-4 induction

194 *Christine M. Graham & D. Brian Thomas:* Differential analysis of $CD4^+$ Th memory clones with identical T-cell receptor (TCR)-$\alpha\beta$ rearrangement (non-transgenic), but distinct lymphokine phenotype, reveals diverse and novel gene expression

203 *Gi-Young Kim, Jong-Hyun Kim, Soon-Cheol Ahn, Hee-Jeong Lee, Dong-Oh Moon, Chang-Min Lee & Yeong-Min Park:* Lycopene suppresses the lipopolysaccharide-induced phenotypic and functional maturation of murine dendritic cells through inhibition of mitogen-activated protein kinases and nuclear factor-κB

212 *Jörg Vollmer, Risini D. Weeratna, Marion Jurk, Ulrike Samulowitz, Michael J. McCluskie, Paul Payette, Heather L. Davis, Christian Schetter & Arthur M. Krieg:* Oligodeoxynucleotides lacking CpG dinucleotides mediate Toll-like receptor 9 dependent T helper type 2 biased immune stimulation

224 *Jaya Talreja, Mohammad H. Kabir, Michael B. Filla, Daniel J. Stechschulte & Kottarappat N. Dileepan:* Histamine induces Toll-like receptor 2 and 4 expression in endothelial cells and enhances sensitivity to Gram-positive and Gram-negative bacterial cell wall components

234 *Ivana Kawikova, Vipin Paliwal, Marian Szczepanik, Atsuko Itakura, Mieko Fukui, Regis A. Campos, Gregory P. Geba, Robert J. Homer, Bettina P. Iliopoulou, Jordan S. Pober, Ryohei F. Tsuji & Philip W. Askenase:* Airway hyper-reactivity mediated by B-1 cell immunoglobulin M antibody generating complement C5a at 1 day post-immunization in a murine hapten model of non-atopic asthma

246 *Hiroko Saito, Hiroshi Morikawa, Karen Howie, Lynn Crawford, Adrian J. Baatjes, Elisha Denburg, Michael M. Cyr & Judah A. Denburg:* Effects of a cysteinyl leukotriene receptor antagonist on eosinophil recruitment in experimental allergic rhinitis

253 *Theresa N. Andersson, Gunilla J. Ekman, Hans Grönlund, Eva Buentke, Tove L. J. Eriksson, Annika Scheynius, Marianne Van Hage-Hamsten & Guro Gafvelin:* A novel adjuvant–allergen complex, CBP–rFel d 1, induces up-regulation of CD86 expression and enhances cytokine release by human dendritic cells *in vitro*

260 *Marcella Potestio, Pietro D'Agostino, Giuseppina Colonna Romano, Salvatore Milano, Viviana Ferlazzo, Alessandra Aquino, Gloria Di Bella, Rosalba Caruso, Giuseppe Gambino, Giustina Vitale, Serafino Mansueto & Enrico Cillari:* $CD4^+$ $CCR5^+$ and $CD4^+$ $CCR3^+$ lymphocyte subset and monocyte apoptosis in patients with acute visceral leishmaniasis

269 *C. S. Vinen, D. R. Turner & D. B. G. Oliveira:* Resistance to re-challenge in the Brown Norway rat model of vasculitis is not always complete and may reveal separate effector and regulatory populations

277 Future meetings

279 Forthcoming papers

Vol 113, No. 3, November 2004

Review article

281 *Lynn M. Williams, Giuseppe Ricchetti, Usha Sarma, Timothy Smallie & Brian M. J. Foxwell:* Interleukin-10 suppression of myeloid cell activation — a continuing puzzle

Original articles

293 *Jessica Strid, Melanie Thomson, Jonathan Hourihane, Ian Kimber & Stephan Strobel:* A novel model of sensitization and oral tolerance to peanut protein

304 *Owain R. Millington, Xiao-Qing Wei, Paul Garside & Allan Mc I. Mowat:* Interleukin-15 is not required for the induction or maintenance of orally induced peripheral tolerance

310 *Ashley Newland, Svjetlana Kireta, Graeme Russ & Ravi Krishnan:* Ovine dendritic cells transduced with an adenoviral CTLA4$_e$EGFP fusion protein construct induce hyporesponsiveness to allostimulation

318 *Michelle N. Wykes, Lynette Beattie, Gordon G. Macpherson & Derek N. Hart:* Dendritic cells and follicular dendritic cells express a novel ligand for CD38 which influences their maturation and antibody responses

328 *Bridget L. Colvin, Audrey H. Lau, Amanda M. Schell & Angus W. Thomson:* Disparate ability of murine $CD8\alpha^-$ and $CD8\alpha^+$ dendritic cell subsets to traverse endothelium is not determined by differential CD11b expression

338 *Nicodemus Tedla, Elias N. Glaros, Ulf T. Brunk, Wendy Jessup & Brett Garner:* Heterogeneous expression of apolipoprotein-E by human macrophages

348 *Ana Flavia Popi, José Daniel Lopes & Mario Mariano:* Interleukin-10 secreted by B-1 cells modulates the phagocytic activity of murine macrophages *in vitro*

355 *Gabriela Salamone, Analía Trevani, Diego Martínez, Mónica Vermeulen, Romina Gamberale, Paula Fernández-Calotti, Silvina Raiden, Mirta Giordano & Jorge Geffner:* Analysis of the mechanisms involved in the stimulation of neutrophil apoptosis by tumour necrosis factor-α

363 *Åsa Schiött, Malin Lindstedt, Bengt Johansson-Lindbom, Erwin Roggen & Carl A. K. Borrebaeck:*

$CD27^-$ $CD4^+$ memory T cells define a differentiated memory population at both the functional and transcriptional levels

371 *Yuiko Ishimoto, Chikako Tomiyama-Miyaji, Hisami Watanabe, Hisashi Yokoyama, Kazuto Ebe, Shunsuke Tsubata, Yutaka Aoyagi & Toru Abo:* Age-dependent variation in the proportion and number of intestinal lymphocyte subsets, especially natural killer T cells, double-positive $CD4^+$ $CD8^+$ cells and $B220^+$ T cells, in mice

378 *Alain G. Assounga & Carol M. Warner:* Transcription of major histocompatibility complex class I (K^b) and transporter associated with antigen processing 1 and 2 genes is up-regulated with age

384 *Bo Tang, David D. Brand, Zhijun Ma, John M. Stuart, Linda K. Myers & Andrew H. Kang:* Pathogenesis of collagen-induced arthritis: modulation of disease by arthritogenic T-cell epitope location

392 *Laura S. Chiapello, José L. Baronetti, María P. Aoki, Susana Gea, Héctor Rubinstein & Diana T. Masih:* Immunosuppression, interleukin-10 synthesis and apoptosis are induced in rats inoculated with *Cryptococcus neoformans* glucuronoxylomannan

401 *Sigrid Hannier, Janet Liversidge, Jeremy M. Sternberg & Alan S. Bowman:* Characterization of the B-cell inhibitory protein factor in *Ixodes ricinus* tick saliva: a potential role in enhanced *Borrelia burgdoferi* transmission

409 Future meetings

411 Forthcoming papers

Vol 113, No. 4, December 2004

Review articles

413 *Tahir M. Razzaq, Patricia Ozegbe, Elizabeth C. Jury, Phupinder Sembi, Nathan M. Blackwell & Panagiotis S. Kabouridis:* Regulation of T-cell receptor signalling by membrane microdomains

427 *George Kolios, Vassilis Valatas & Stephen G. Ward:* Nitric oxide in inflammatory bowel disease: a universal messenger in an unsolved puzzle

Commentary

438 *Lorna Proudfoot:* Parasitic helminths tip the balance: potential anti-inflammatory therapies

Original articles

441 *François Spertini, Veronique Perret-Menoud, Nathalie Barbier, Talal Chatila, Catherine Barbey & Blaise Corthesy:* Epitope-specific crosslinking of CD45 down-regulates membrane-associated tyrosine phosphatase activity and triggers early signalling events in human activated T cells

453 *Wenhong Zhou, Leoncio Vergara & Rolf König:* T cell receptor induced intracellular redistribution of type I protein kinase A

460 *Tatiana Lebedeva, Nadja Anikeeva, Spyros A. Kalams, Bruce D. Walker, Ibragim Gaidarov, James H. Keen & Yuri Sykulev:* Major histocompatibility complex class I–intercellular adhesion molecule-1 association on the surface of target cells: implications for antigen presentation to cytotoxic T lymphocytes

472 *Shikhar Mehrotra, Arvind Chhabra, Abolokita Chakraborty, Subhasis Chattopadhyay, Mark Slowik, Robert Stevens, Ryan Zengou, Clinton Mathias, Lisa H. Butterfield, David I. Dorsky, James S. Economou, Bijay Mukherji & Nitya G. Chakraborty:* Antigen presentation by MART-1 adenovirus-transduced interleukin-10-polarized human monocyte-derived dendritic cells

482 *Joanne Lees, David Boam, Tanakorn Proungvitaya & Peter J. Wood:* Site-specific regulation of tissue dendritic cell function by granulocyte–macrophage colony-stimulating-factor

491 *Helen S. Goodridge, Fraser A. Marshall, Emma H. Wilson, Katrina M. Houston, Foo Y. Liew, Margaret M. Harnett & William Harnett: In vivo* exposure of murine dendritic cell and macrophage bone marrow progenitors to the phosphorylcholine-containing filarial nematode glycoprotein ES-62 polarizes their differentiation to an anti-inflammatory phenotype

499 *Monika Gad, Nanna N. Kristensen, Evelyn Kury & Mogens H. Claesson:* Characterization of T-regulatory cells, induced by immature dendritic cells, which inhibit enteroantigen-reactive colitis-inducing T-cell responses *in vitro* and *in vivo*

509 *Basilia Zingarelli, Paul W. Hake, Timothy J. Burroughs, Giovanna Piraino, Michael O'Connor & Alvin Denenberg:* Activator protein-1 signalling pathway and apoptosis are modulated by poly(ADP-ribose) polymerase-1 in experimental colitis

518 *Sonia Barroso, Berta Sánchez, Antonia José Álvarez, Margarita López-Trascasa, Amparo Lanuza, Rafael Luque, Ingeborg Wichmann & Antonio Núñez-Roldán:* Complement component C7 deficiency in two Spanish families

524 *Grant R. Yeaman, Susana Asin, Sally Weldon, Douglas J. Demian, Jane E. Collins, Jorge L. Gonzalez, Charles R. Wira, Michael W. Fanger & Alexandra L. Howell:* Chemokine receptor expression in the human ectocervix: implications for infection by the human immunodeficiency virus-type I

534 Future meetings

536 Forthcoming papers

537 **Author and Subject Indexes for Volume 113**